

WHAT IS CLAIMED IS:

1. A method for parallel approval of an electronic document by a plurality of users, comprising the steps of:

A) generating an original Data Authentication Code, hereinafter referred to as "DAC 0", linked to the electronic document;

B) making the electronic document available to each user; and

C) for approval by each user, performing the sub-steps of:

i) opening the electronic document for approval;

ii) retrieving DAC 0;

iii) approving the electronic document;

iv) generating for the electronic document an approval Data Authentication Code, hereinafter referred to as "DAC x";

v) comparing DAC x to DAC 0, and proceeding with the approval only if DAC x is equal to DAC 0; and

vi) storing approval information in a user Approval Data Packet, hereinafter referred to as "ADP x".

2. A method according to claim 1, further comprising an additional step of:

D) incorporating the approval information from each ADP x into the electronic document.

3. A method according to claim 2, wherein step D) comprises the sub-steps of:

i) copying the electronic document into an insertion electronic document;

ii) retrieving DAC 0; and

iii) for each ADP x, performing the sub-steps of:

a) opening ADP x;

b) retrieving DAC x;

c) comparing DAC x to DAC 0, and proceeding only if DAC x is equal to DAC 0;

d) inserting approval information stored in ADP x into the insertion electronic document; and

e) generating a new Data Authentication Code, hereinafter referred to as "DAC 0'", linked to the insertion electronic document.

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10 4. A method according to claim 3, wherein sub-step D) iii) d) comprises including the approval information at a pre-targeted location in the insertion electronic document.

15 5. A method according to claim 2, wherein step D) comprises the sub-steps of:

i) opening the electronic document;

ii) for each ADP x, performing the sub-steps of:

a) opening ADP x;

20 b) inserting approval information stored in ADP x into the electronic document, thereby generating a modified electronic document ; and

c) generating a new Data Authentication Code, hereinafter referred to as "DAC 0'", linked to the modified electronic document.

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6. A method according to claim 5, wherein the inserting of sub-step D) iii) d) comprises including the approval information at a pre-targeted location in the electronic document.

7. A method according to claim 1, wherein sub-step C) vi) comprises encrypting ADP x.

8. A method according to claim 1, wherein step A) comprises encrypting DAC 0.

9. A method according to claim 1, wherein, in substep C) vi), the approval information comprises DAC x.

10. A method according to claim 1, wherein, in substep C) vi), the approval information comprises a signature of the user.

11. A method according to claim 1, wherein, in substep C) vi), the approval information comprises biometric information related to the user.

12. A method according to claim 1, wherein, in substep C) vi), the approval information comprises a date and a time at which substep C) ii) was executed.

13. A method for parallel approval of an electronic document by a plurality of users, comprising the steps of:

A) generating an original Data Authentication Code, hereinafter referred to as "DAC 0", linked to the electronic document;

B) making the electronic document available to each user;

C) for approval by each user, performing the substeps of:

i) opening the electronic document for approval;

ii) approving the electronic document;

iii) generating for the electronic document an approval Data Authentication Code, hereinafter referred to as "DAC x";

iv) storing approval information in a user Approval Data Packet, hereinafter referred to as "ADP x"; and

D) for authenticating the approval by each user, performing for each DAC x the sub-steps of:

i) retrieving DAC 0 and DAC x; and

ii) comparing DAC x to DAC 0, and accepting the approval only if DAC x is equal to DAC 0.

14. A method according to claim 13, further comprising the steps of:

E) inserting approval information stored in ADP x for each user into the electronic document, thereby generating a modified electronic document ; and

F) generating a new Data Authentication Code, hereinafter referred to as "DAC 0'", linked to the modified electronic document.

15. A method according to claim 13, wherein sub-step C) iv) comprises encrypting ADP x.

16. A method according to claim 13, wherein step A) comprises encrypting DAC 0.

17. A method according to claim 13, wherein, in sub-step C) iv), the approval information comprises DAC x.

18. A method according to claim 13, wherein, in sub-step C) iv), the approval information comprises a signature of the user.

19. A method according to claim 13, wherein, in sub-step C) iv), the approval information comprises biometric information related to the user.

20. A method according to claim 13, wherein, in sub-step C) iv), the approval information comprises a date and a time at which sub-step C) ii) was executed.

5 21. A method for parallel approval of sections of an electronic document by a plurality of users, the method comprising the steps of:

A) generating for each section of the electronic document an original section Data Authentication Code, hereinafter referred to as "DAC_s 0", linked to said section of the electronic document;

10 B) making the electronic document available to each user; and

C) for approval by each user of corresponding sections of the electronic document, performing the sub-steps of:

i) opening the electronic document for approval;

ii) selecting the corresponding sections for approval;

15 iii) retrieving each of the DAC_s 0 linked to the corresponding sections of the electronic document;

iv) approving the corresponding sections of the electronic document;

v) generating for each corresponding sections a section approval Data Authentication Code, hereinafter referred to as "DAC_s x";

20 vi) comparing the DAC_s x to the corresponding DAC_s 0, and proceeding with the approval only if in each case DAC_s x is equal to DAC_s 0; and

vii) storing approval information in a user Approval Data Packet, hereinafter referred to as "ADP x".

25 22. A method according to claim 21, further comprising an additional step of: D) incorporating the approval information from each ADP x into the electronic document.

23. A method according to claim 22, wherein step D) comprises, for each ADP x, performing the sub-steps of:

- i) opening the ADP x
- 5 ii) selecting and opening a target section of the electronic document wherein the approval information is to be inserted;
- iii) retrieving the $DAC_s 0$ and $DAC_s x$ corresponding to said target section;
- 10 iv) comparing $DAC_s x$ to $DAC_s 0$, and proceeding only if $DAC_s x$ is equal to $DAC_s 0$;
- v) inserting approval information stored in ADP x into the target section of the electronic document, thereby generating a modified section of the electronic document ; and
- 15 vi) generating a new section Data Authentication Code, hereinafter referred to as " $DAC_s 0'$ ", linked to the modified electronic document.

24. A method according to claim 23, wherein the inserting of sub-step D) v) comprises including the approval information at a pre-targeted location in the target section of the electronic document.

25. A method according to claim 22, wherein step D) comprises, for each ADP x, performing the substeps of:

- i) opening the ADP x
- 25 ii) selecting and opening a target section of the electronic document wherein the approval information is to be inserted;
- iii) inserting approval information stored in ADP x into the target section of the electronic document, thereby generating a modified section of the electronic document ; and

iv) generating a new section Data Authentication Code, hereinafter referred to as "DAC_s 0'", linked to the modified electronic document.

26. A method according to claim 25, wherein the inserting of sub-step D) iii) comprises including the approval information at a pre-targeted location in the target section of the electronic document.

27. A method according to claim 21, wherein sub-step C) vii) comprises encrypting ADP x.

28. A method according to claim 21, wherein step A) comprises encrypting each DAC_s 0.

29. A method according to claim 21, wherein, in sub-step C) vii), the approval information comprises DAC_s x.

30. A method according to claim 21, wherein, in sub-step C) vii), the approval information comprises a signature of the user.

31. A method according to claim 21, wherein, in sub-step C) vii), the approval information comprises biometric information related to the user.

32. A method according to claim 21, wherein, in sub-step C) vii), the approval information comprises a date and a time at which sub-step C) iv) was executed.

33. A method for parallel approval of sections of an electronic document by a plurality of users, each section being approved by a single user, the method comprising the steps of:

A) making the electronic document available to each user; and
B) for approval by each user of a corresponding section of the electronic document, performing the sub-steps of:

- i) opening the electronic document for approval;
- ii) selecting the corresponding section for approval;
- iii) approving the corresponding section of the electronic document;
- iv) generating for the corresponding section a section approval Data Authentication Code, hereinafter referred to as "DAC_s x";
- v) storing approval information in a user Approval Data Packet, hereinafter referred to as "ADP x".

34. A method according to claim 33, wherein sub-step B) v) comprises encrypting ADP x.

35. A method according to claim 33, wherein sub-step B) iv) comprises encrypting DAC_s x.

36. A method according to claim 33, wherein, in sub-step B) v), the approval information comprises DAC_s x.

37. A method according to claim 33, wherein, in sub-step B) v), the approval information comprises a signature of the user.

38. A method according to claim 33, wherein, in sub-step B) v), the approval information comprises biometric information related to the user.

39. A method according to claim 33, wherein, in sub-step B) v), the approval information comprises a date and a time at which sub-step B) iii) was executed.

40. A method of merging a plurality of approved electronic documents into a single approved master document, the method comprising the steps of:

A) approving the electronic documents by performing, for each of said
5 electronic documents, the sub-steps of:

i) generating an original Data Authentication Code, hereinafter referred to as "DAC 0", linked to the electronic document;

ii) having the electronic document made available to each user;

iii) for approval by each user, performing the sub-steps of:

10 a) opening the electronic document for approval;

b) approving the electronic document;

c) generating for the electronic document an approval Data Authentication Code, hereinafter referred to as "DAC x";

15 d) storing approval information in a user Approval Data Packet, hereinafter referred to as "ADP x";

B) generating the master document;

C) generating a master Data Authentication Code and a master Approval Data Packet, respectively hereinafter referred to as "DACm 0", and ADPm, both linked to said master document; and

20 D) for merging of each electronic document, performing the sub-steps of:

i) opening the electronic document;

ii) retrieving the DAC 0 and DAC x linked to said electronic document;

iii) comparing DAC x to DAC 0, and proceeding only if DAC x is equal to DAC 0; and

25 iv) incorporating the electronic document into the master document;

v) generating a new Data Authentication Code, hereinafter referred to as "DACm 0'" linked to the master document incorporating said electronic document; and

vi) storing ADP x corresponding to said electronic document into ADPm.

41. A method according to claim 40, wherein:

sub-step A) iii) c) comprises encrypting ADP x; and
step C) comprises encrypting ADPm.

42. A method according to claim 40, wherein:

sub-step A) i) comprises encrypting DAC 0; and
step C) comprises encrypting DACm 0.

43. A method according to claim 40, wherein, in sub-step A) iii) d), the approval information comprises DAC x.

44. A method according to claim 40, wherein, in sub-step A) iii) d), the approval information comprises a signature of the user.

45. A method according to claim 40, wherein, in sub-step A) iii) d), the approval information comprises biometric information related to the user.

46. A method according to claim 40, wherein, in sub-step A) iii) d), the approval information comprises a date and a time at which sub-step A) iii) b) was executed.